PSY25

TIMING OF FIRST-TIME USE OF BIOLOGICS AND HEALTHCARE COSTS AND UTILIZATION IN PSORIASIS

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OBJECTIVES: Assess the timing of biologic initiation and associated healthcare utilization and costs among psoriasis (PsO) patients. **METHODS:** Adults (18-64 years) with ≥2 PsO diagnoses (ICD-9-CM=696.1) after 4/30/2004, ≥1 non-biologic pharmacologic systemic treatment ("non-biologic") after the first observed diagnosis, and ≥1 biologic treatment after the first non-biologic were selected from a de-identified US-based claims database. The index date was the date of the first biologic after the first non-biologic prescription fill. Patients had continuous eligibility during the 12-months before (baseline) and 24-months following (study period) the index date. Patients were categorized into two cohorts based on days from the first non-biologic to index date: ">180-days" and "≤180-days". Study period utilization and costs were compared between cohorts using unadjusted and multivariable adjusted analyses. **RESULTS:** There were 759 ">180-days" and 881 "≤180-days" patients identified. During baseline, more patients in the"≤180-days" cohort had psoriatic arthritis compared to the ">180-days" cohort (38.3% vs. 31.1%). "≤180-days" patients incurred more inpatients visits; higher medical, inpatient, and outpatient costs; and lower pharmacy costs compared to ">180-days" patients during baseline. During the study period, the "≤180-days" cohort had higher unadjusted number of emergency room (0.52 vs 0.45) and outpatient visits (36.03 vs 31.89) as well as higher total ($20,971 vs $17,922, excluding PsO biologic costs), medical ($15,577 vs $12,749), and outpatient costs ($11,466 vs $9,527) (all p-values<0.05). Multivariable regressions adjusting for baseline characteristics confirmed the unadjusted results. The numeric difference in adjusted costs between cohorts was small (adjusted 24-month difference in total, medical, and pharmacy costs=$3,123, $1,851 and $2,464, p-value=0.0609, 0.0016, and 0.2202, respectively). **CONCLUSIONS:** PsO patients initiating biologics ≤180-days from the first non-biologic had more severe disease and higher costs at baseline. Over the 24-month study period, differences in healthcare utilization and costs between patients with different timing of biologic initiation were small and not clinically meaningful.

PSY26

COST-MINIMIZATION ANALYSIS OF INFLIXIMAB VERSUS ADALIMUMAB IN THE TREATMENT OF CROHN'S DISEASE AND ULCERATIVE COLITIS

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OBJECTIVES: Chron's disease and ulcerative colitis are clinically similar diseases, classified as serious inflammatory diseases mainly in the intestinal region. A cost minimization analysis was conducted in order to compare the costs of treatment of infliximab versus adalimumab in the treatment of ulcerative colitis and Chron´s disease. **METHODS:** Considering published data on network meta-analysis providing similar results on the efficacy of both treatments, a cost-minimization analysis was developed under the public and private healthcare system perspective . Comparator prices were obtained from public available sources (government centralized purchased contracts in the Public Perspective and factory prices including taxes (PF18%) in the Private Perspective). Annual costs were calculated according to the dose described on drugs' respective labels. The average weight per patient was 64 kg, based on the only local clinical study in Chron´s Disease patients reporting weight found in a literature review. **RESULTS:** Annual costs were divided between induction (1st year) and maintenance (2ndyear and so forth) regimens. Annual cumulative costs for induction regimen were R$ 24,041.98 and R$ 22,874.32 on the public perspective and R$ 80,527.36 and R$ 88,007.36 on private perspective for infliximab and adalimumab, respectively. Maintenance regimen costs were R$ 18,031.49 and R$ 19,606.56 on the public perspective and R$ 60,395.52 and R$ 75,434.88 on the private perpective for infliximab and adalimumab, respectively. Incremental costs on a 2-year time horizon was -R$ 407.41, in the public perspective, and -R$ 22,519.36, in the private perspective (infliximab is less costly than adalimumab). **CONCLUSIONS:** In the public perspective, although showing higher costs on the first year of treatment, infliximab is less costly on longer treatment duration. On the private perspective, infliximab is less costly regardless of time horizon or treatment regimen.

PSY27

ADHERENCE TO IRON CHELATION THERAPY AND ASSOCIATED HEALTHCARE RESOURCE UTILIZATION AND COSTS IN MEDICAID PATIENTS WITH THALASSEMIA

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OBJECTIVES: To compare all-cause and thalassemia-related healthcare resource utilization (RU) and costs in thalassemia patients who are adherent vs. non-adherent to iron chelation therapy (ICT). **METHODS:** Healthcare claims databases from six state Medicaid programs (Florida, Iowa, Kansas, Mississippi, Missouri, and New Jersey) (1997-2013) were analyzed. Patients with ≥1thalassemia ICD-9 diagnosis code, ≥2 dispensings for deferoxamine or deferasirox, and ≥6 months of continuous enrollment before first ICT dispensing were included. Adherence was defined as a medication possession ratio ≥0.80. All-cause and thalassemia-related RU and costs were evaluated per-patient-per-month (PPPM) during the treatment period. Adherent and non-adherent patients were compared using adjusted incidence rate ratios (aIRR) for RU, and adjusted cost differences (aCD). **RESULTS:** Of the 218 eligible thalassemia patients, 137(62.8%) were adherent. Baseline demographic and clinical characteristics were similar between adherent and non-adherent patients, although adherent patients were younger (20.9 vs. 25.8 years old, p=0.011). The adjusted rate of thalassemia-related outpatient visits PPPM was higher in adherent patients (aIRR: 1.11, p=0.004). However, adherent patients incurred fewer thalassemia-related hospitalizations (0.80, p=0.002) and ER visits (0.64, p<0.001). PPPM thalassemia-related medical costs followed a similar trend with slightly higher outpatient costs (aCD: $113, p=0.504) and lower total costs (aCD: -$1,922, p=0.056), mainly driven by lower inpatient costs (aCD: -$2,504, p=0.052). Similar results were observed for all-cause RU and medical costs. While all-cause pharmacy costs were higher in adherent patients (aCD: $1,506, p<0.001), non-ICT pharmacy costs was slightly lower (-$234, p=0.200). **CONCLUSIONS:** This study shows that thalassemia patients adherent to ICT incurred more outpatient visits, which may be related to better disease monitoring and management, potentially resulting in the lower rates of acute care visits and related costs observed in this cohort. Enhanced adherence to ICT may reduce downstream costs associated with acute care, thereby reducing the financial burden of thalassemia from a payer's perspective.

PSY28

PREVALENCE AND ECONOMIC BURDEN OF PRESCRIPTION OPIOID MISUSE AND ABUSE SYSTEMATIC REVIEW

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OBJECTIVES: CDC has classified prescription drug abuse an epidemic with significant societal economic burden. A 2009 systematic review on economic burden of prescription opioid misuse and abuse (POMA) found total cost (US, 2001) was ~$8.6 billion and abusers' annual medical costs were ~$14,000 higher than nonabusers. The objective of this research was to update and synthesize all evidence around prevalence and costs of opioid abuse. **METHODS:** A systematic review was conducted to update the 2009 results by reviewing worldwide literature involving humans published in English from 2009-2014. The primary focus was prevalence and cost of POMA. Sources included PubMed, Embase, OpenSIGLE (for gray literature) and others. **RESULTS:** 5,281 citations were identified and 505 selected for inclusion; 297 prevalence, 38 cost, 17 cost+prevalence, 124 consequences/sequelae, and 29 other. CASP checklists were completed for 21 papers prioritized for further review; cost alone and cost+prevalence were included for final review. POMA prevalence ranged from 1.6 – 2.66/1000 in US privately insured and 5.0 – 8.7/1000 in Medicaid. 5 year VA prevalence was 11.1/1000. Prevalence in the US increased from 1.8/1,000 to 5.0/1,000 in Florida Medicaid and 0.5/1,000 to 1.6/1,000 in commercially insured from 1999-2006. Global illicit opioid dependence rate was 2.2/1000. Total US societal costs of POMA were $53.4 -$57.7 billion. Prescription opioid poisoning accounted for $15.9 billion. Excess annual medical costs in commercial claims data for patients with diagnosed opioid abuse and dependence was $9,456-$20,546. Similar results were seen in Medicaid and the VA which were ~$15,000. The per event cost for opioid abuse related ED/inpatient care was $18,891. **CONCLUSIONS:** Although comparison of societal costs is difficult given differences in methodology and years studied, societal costs increased from $8.6 billion in 2001 to over $55.7 billion in 2007. POMA is a societal problem and requires action by government, opioid manufacturers, practitioners and payers.

PSY29

DEMOGRAPHIC DISTRIBUTION AND HEALTH CARE BURDEN OF PATIENTS DIAGNOSED WITH ANKYLOSING SPONDYLITIS IN THE U.S. MEDICARE POPULATION

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OBJECTIVES: To investigate the demographic distribution and health care burden of patients diagnosed with ankylosing spondylitis (AS) using Medicare fee-for-service (FFS) data. **METHODS:** A retrospective analysis was performed using the 100% Medicare FFS Datasets from October 1, 2008 through December 31, 2012. Patients diagnosed with AS were identified using International Classification of Diseases, 9th Revision, Clinical Modification diagnosis code 720.0, and the first diagnosis date was designated as the index date. All patients were required to have continuous medical and pharmacy benefits 1-year pre- (baseline period) and post-index date (follow-up period). Health care resource utilization and costs during the baseline and follow-up periods were calculated. **RESULTS:** A total of 8,990 AS patients were included in the study. The average age at diagnosis was 75 years. Nearly 88.7% of patients were white, 62.97% were women and many resided in the South U.S. region (40.33%). The most common baseline comorbidities were chronic obstructive pulmonary disease (33.20%), diabetes (30.50%), cerebrovascular disease (22.65%) and congestive heart failure (18.85%). During the follow-up period, 73.04% of patients had inpatient admissions, 52.31% had emergency room visits, 91.43% had outpatient office visits, 91.43% had outpatient visits and 57.67% had pharmacy visits, resulting in average costs of, $37,077, $298, $5,397, $5,695 and $6,668, respectively. The average total costs were $49,440 during the follow-up period. The four most frequently prescribed medications for AS were prednisone hydrocodone (3.59%), bit/acetaminophen (3.17%), methotrexate sodium (2.79%) and levothyroxine sodium (2.42%). **CONCLUSIONS:** AS patient demographic and clinical characteristics in the Medicare population were assessed. Study patients were often diagnosed with comorbid conditions, and had high health care utilization and costs.

PSY30

DIRECT HEALTHCARE COSTS OF OPIOID ABUSE IN PATIENTS PRESCRIBED IMMEDIATE RELEASE HYDROCODONE IN THE UNITED STATES

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